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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,861	11/15/2001	Takao Sugawara	1990.65985	4780

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EXAMINER

COLON, ROCIO

ART UNIT PAPER NUMBER

2697

DATE MAILED: 09/29/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/002,861

Applicant(s)

SUGAWARA ET AL.

Examiner

Rocio Colon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-12 and 15-22 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 13, 14 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

DETAILED ACTION

*Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-5, 8-12 and 15-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al. (USPN 5,881,037).

Regarding claims 1, 8, 15 and 18, Tanaka et al. disclose an information recording and reproducing apparatus for recording and reproducing information onto/from a magnetic recording medium (column 1, line 17), comprising: a data recording unit which inserts a predetermined specific code train into at least two or more portions including head and last portions of data and records the data onto the medium upon data recording (column 4, lines 39-40 and 41-44); and a data reproducing unit which separates a head reproduced signal (column 6, lines 24-27<sup>9</sup>) by using clocks and, thereafter, executes a clock extraction and an amplitude correction by using a signal corresponding to said specific code train upon data reproduction (column 6, lines 27-29).

Regarding claims 2, 9 and 19, Tanaka et al. disclose the data recording unit and the data reproducing unit record and, thereafter, reproduce user data onto/from the medium without encoding it to an RLL code (column 2, line 24, the synchronization code is not a RLL code).

Regarding claims 4, 11, 16 and 21, Tanaka et al. disclose the data recording unit arranges sync bytes to the head position of each data which was split by the specific code train (column

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2, lines 48-49) and records the data onto the medium (column 2, lines 58-59), and the data reproducing unit detects sync bytes subsequent to the specific code train, presumes a head bit of the data, and obtains a synchronization of a decoding (column 4, lines 49-51).

Regarding claims 5, 12, 17 and 22 Tanaka et al. disclose the data recording unit inserts sync bytes into the specific code train (column 2, lines 50-52) and records the data onto the medium (column 2, lines 58-59), and the data reproducing unit detects the sync bytes from the specific code train, presumes a head bit of the data, and obtains a synchronization of a decoding (column 4, lines 49-51).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 3, 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. in view of Applicant Admitted Prior Art (AAP).

Tanaka et al. disclose in the clock extraction by the data reproducing unit, an inherent sampling time is obtained on the basis of phase information extracted from the signal corresponding to the specific code train (column 11, lines 28-29).

Tanaka et al. fail to disclose the signal amplitude is sampled again by an interpolating operation of an interpolating filter. The AAP disclose the signal amplitude synchronized with the clock is sampled again by an interpolating operation of an interpolating filter according to the sampling time (page 4, lines 2-5). Therefore, it would have been obvious to one with

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ordinary skill in the art at the time the invention was made to modify the device of Tanaka et al. because the AAP teaches the signal may be sampled by an interpolating filter to interpolate the signal and obtain a sampling time.

*Allowable Subject Matter*

4. Claims 6, 7, 13, 14 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rocio Colon whose telephone number is (703) 305-3947. The examiner can normally be reached on Mon-Thu 8:00a.m.-6:30p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (703)308-4825. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

PCV  
PCV

September 10, 2003

  
DAVID HUDSPETH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2000